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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPLICANT(s):	Robert J. Tuttle	CONF. NO.	5410
SERIAL NO.:	10/665,124	ART UNIT:	1746
FILING DATE:	September 22, 2003	EXAMINER:	Rita Ramesh Patel

TITLE: **CONTROL SYSTEM AND METHOD FOR SUPPLYING DETERGENT AND OTHER FLUIDS TO MULTIPLE WASHING MACHINES**

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APPELLANTS REPLY

(37 C.F.R. §41.41)

This is an appeal from the final rejection of the claims in the subject application. A Notice of Appeal was filed on November 2, 2007. In response to Applicant's Brief on Appeal, the Examiner has presented new grounds for rejection in the Answer mailed March 21, 2008. Applicant responds to these new grounds according to the following:

[1] Real Party In Interest

The real party in interest in this Appeal is the assignee, Mac-Gray Corporation, Waltham, Ma.

[2] Related Appeal And Interferences

There are no related appeals or interferences.

[3] Status Of The Claims

Claims 1, 3-7, 10, 11, 14, 15, and 18-22 stand rejected under 35USC103(a) based on the combined teaching of Blackburn, U.S. Patent No. 3,891,123, in view of the reference Hiortdahl, U.S. Patent No. 3,864,616.

Claims 2, 16, 17, 23-27, 29-31, and 34-36 stand rejected under 35USC103(a) based on the combined teaching of Blackburn and Hiortdahl, U.S. Patent No. 3,864,616 and further in view of Pittendreigh, U.S. Patent No. 3,192,744.

Claims 8 and 9, stand rejected under 35USC103(a) based on the combined teaching of Blackburn, Hiortdahl, , and further in view of Bruntz, U.S. Patent No. 5,978,995.

Claims 28 and 32-33 are rejected under 35USC103(a) based on the combined teadhing of Blackburn and Hiortdahl, Pittendreigh and Bruntz.

Claims 12 and 13 stand rejected under 35USC103(a) based on the combined teaching of Blackburn and Hiortdahl and further in view of Yamamoto, U.S. Patent No. 3,362,515.

These rejections is contained in the Examiner's Answer mailed March 21, 2008. Claims 1-36 are presented for consideration in this Appeal and are contained in the attached Claim Appendix.

[4] Status Of Amendments

There were no amendments filed after Final Rejection.

[5] Summary Of The Claimed Subject Matter

The system of independent claim 1, is described at page 9, line 19, through page 10, line 22 with reference to figure 1 of the application. The system provides for the distribution of a working fluid (5,6), for example, detergent, bleach, fabric softener and the like, to a group of washing machines 100 in a laundry facility, typically deployed in group dwellings, such as for example, dormitories, or apartment buildings. A working fluid dispensing system 17, (see figure 3) distributes metered amounts of detergent, bleach etc. from tanks 5 and 6 to washing machines 100 through a system of conduits (21,26,27), manifolds (12a, 12b) and valves (13-16), as shown in figure 1. The dispensing system 17 is centrally controlled by a microprocessor dispensing controller 2 to distribute metered amounts of working fluids 5 and 6, according to a predetermined sequence. Dispensing controller 2 cooperates with the washing sequence controller 105 associated with a selected washing machine 100. Payment for the working fluid is authorized through payment processor 25. A system controller 1 collects data from dispensing processor 2, payment processor 25, and washing sequence controller 105 and sends commands to the processors to cause metered amounts of detergent, etc. to a washing machine 100, according to a predetermined control sequence.

The dispensing system of dependent claim 2, includes a user interface operatively connected to the system controller for the purpose of allowing user selections of washing machines, detergent and other working fluids. The user interface 4 is described in the specification of this application on page 8, lines 19-28 with reference to figure 1.

The dispensing system of dependent claim 3, includes a gang controller 3 for connecting the system controller to multiple washing machines and for monitoring the status of individual washers and coordinates the control of individual washing cycles. The gang controller is described in the specification of this application on page 9, lines 1-9 with reference to figure 1.

The dispensing system of dependent claim 4, contains the basic elements of dispensing system 17, as shown in figure 1, and described at page 9, line 19 through page 10, line 22. The dispensing system of claim 4 includes pump (10,11) connected to tank (5,6) to move working fluid (8,9) from the tank to manifold (12). An array of valves (13-16) allow the flow of working fluid from manifold (12) to the washers (100). In particular, the manifold (12) permits the accumulation of working fluid to obtain a stabilized pressure and temperature. This allows for both an accurate monitoring of temperature and fluid flow in the system. The elements of the temperature sensing system and flow monitoring (18,19) are described with reference to figure 3 and are further covered in dependent claims 5-11.

The system of claim 5 includes a system of sensors comprising a flow sensor (18,19) in the distribution conduit downstream of the pump for generating a signal for use by the dispensing controller 2. The sensor system is described on page 10, lines 24 through page 11, line 11 with reference to figures 1 and 3.

In the system of dependent claims 8 and 9, the method of dependent claim 28, and the system of dependent claims 32-33, the temperature of working fluid (5,6) is sensed in the manifold 12 (dependent claim 9) and used by the controller 1 to adjust the fill interval (dependent claim 28). In particular in the method of claim 32 the temperature sensing is delayed for a predetermined interval to allow the temperature of the working fluid to reach equilibrium and in the method of dependent claim 33 equilibrium is determined when the temperature of the working fluid in the tank (8,9) is the same as that in the manifold (12).

In dependent claim 15 and its dependent claims 16-22, the operation of the controllers are described. Each element of the system hierarchy is implemented by an appropriate microprocessor designed to provide the specified function as programmed by imbedded or stored algorithms. The operation of the controllers is described, in part, at page 7,

line 13, through page 9, line 9 of the specification with reference to figures 2 and 5. A first algorithm causes system controller 1 to activate the dispensing system controller 2 in response to acceptance of payment by payment processor 25, see page 7, lines 32 through page 8, line 17 with reference to figure 2.

The method of independent claim 23, is described at page 14, line 12 through, page 16, line 3, with reference to figures 2 and 5. In conjunction with user interface 4, shown in figure 1, the user is prompted to offer a means of payment, for example a credit card, the user then selects a particular washing machine and the system checks its availability. The washing sequence of the washing machine is activated and the system checks for available working fluids for selection by the user. A payment transaction is processed according to the selection made and when confirmation of payment is obtained a metered dosage of detergent is dispensed.

The method of claim 26, dependent from independent claim 23, is described at page 11, line 34 through page 12, line 18 of the application. The metered dosage is provided by activating a pump (10, 11) to fill manifold (12). The manifold is connected to the selected washing machine through a conduit controlled by a valve (13-16). The valve is opened for a predetermined time to deliver a predetermined amount of working fluid (5,6).

The system of independent claim 35 is described at page 9, line 19, through page 10, line 22, with reference to figures 1 and 3 of the application. The system provides for the distribution of a working fluid (5,6) as described above. A working fluid dispensing system 17, (see figure 3) distributes metered amounts of detergent, bleach etc. from tanks 5 and 6 to washing machines 100 through a system of conduits (21,26,27), manifolds (12a, 12b) and valves (13-16), as shown in figure 1. The dispensing system 17 is centrally controlled by a microprocessor dispensing controller 2 to distribute metered amounts of working fluids 5 and 6, according to a predetermined sequence.

Dispensing controller 2 cooperates with the washing sequence controller 105 associated with a selected washing machine 100. Payment for the working fluid is authorized through payment processor 25. A system controller 1 collects data from dispensing processor 2, payment processor 25, and washing sequence controller 105 and sends commands to the processors to cause metered amounts of detergent, etc. to a washing machine 100, according a predetermined control sequence.

The dispensing system of claim 35 further includes pump (10,11) connected to tank (5,6) to move working fluid (8,9) from the tank to manifold (12). An array of valves (13-16) allow the controlled flow of working fluid from manifold (12) to the washers (100). The manifold (12) permits the accumulation of working fluid to obtain as stabilized pressure and temperature. The function of manifold 12 is to allow for both an accurate monitoring of temperature and fluid flow in the system as well as a mechanism to assist in maintaining a stabilized system.

[6] Grounds for Rejection to be reviewed on Appeal

A. Applicant requests that the grounds for rejection of claims 1, 3-7, 10, 11, 14, 15, and 18-22 under 35USC 103(a), based on the combined teaching of the references Blackburn and Hiortdahl be reviewed.

B. Applicant requests that the grounds for rejection of claims 2, 16, 17, 23-27, 29-31, and 34-36 under 35USC 103(a), based on the combined teaching of the references Blackburn, Hiortdahl, and Pittendreigh be reviewed.

C. Applicant requests that the grounds for rejection of claims 8 and 9 under 35USC 103(a), based on the combined teaching of the references Blackburn, Hiortdahl, , and Bruntz be reviewed.

D. Applicant requests that the grounds for rejection of claims 28 and 32-33, under 35USC 103(a), based on the combined teaching of the references Blackburn and Hiortdahl, Pittendreigh and Bruntz be reviewed.

E. Applicant requests that the grounds for rejection of claims 12 and 13 under 35USC 103(a), based on the combined teaching of the references Blackburn and Hiortdahl and Yamamoto be reviewed.

[7] Argument

A. The combined teaching of the reference Blackburn in view of Hiortdahl does not render the subject matter of Claims 1, 3-7, 10, 11, 14, 15 and 19-22 obvious because it fails to teach or otherwise suggest each and every limitation of the claims. It is well established that to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). *See also In re Wilson*, 165 U.S.P.Q. 494 (C.C.P.A. 1970).

In particular claim 1 states:

> **"a system controller connected to said payment processor, said washing sequence controller, and said dispensing controller to receive inputs therefrom and to generate and send control signals thereto according to a predetermined control sequence"**

This element of the claimed system enables a centralized control of the functions of an array of washing machines including payment, working fluid distribution, and washing cycle.

The system of Blackburn discloses a system for distributing fluids to washing machines in an industrial laundry facility. The system employs a head tank 19 connected to individual dispensers at each washer, (see abstract in Blackburn). A holding tank 14

provides a supply of fluid and contains a mixer to dilute concentrated chemicals for use. A pump 16 pumps the mixed fluid into head tank 19. The level of head tank 19 is controlled by float actuated switch 21. Each washer unit 27 has its own dispenser tank 24 that receives fluid from head tank 19 by gravity, according to the "predetermined head of supply in head tank 19" (see column 2, lines 32-36 . There is no control provided between head tank 19 and washer unit tanks 24. Each washer unit has a continuous supply of mixed fluid fed by gravity from head tank 19. Solenoid operated valves 25 serve to dispense the fluid into the washer unit 27 from unit tanks 24 in response to a programmer 40 on each washer unit.

Blackburn, therefore, does teach a system of distributing fluids to washer units, but it teaches nothing else that is applicable to the claims of this application. Blackburn fails to teach a payment controller for providing a payment system. There is no payment considered in the industrial facility of Blackburn. Blackburn fails to teach a dispensing controller for centralized control of a centralized dispenser system for detergent and other fluids used in a laundry facility. Blackburn fails to teach a system controller for coordinating payment for dispensing of detergent and other fluids with dispensing of the fluids and operation of the washing cycles of the washing machines.

The Examiner states:

> **" Blackburn discloses a dispensing sequence that is controlled by output signals from programmer 60 to provide plural outputs.....Thus, providing the apparatus of Blackburn with automatic dispersion of supplies to individual machines at individual times, in operation without dependence on each other.....As seen in figure 3, programmer 60 enables independent operation of a washing machine according to a desired washing sequence"**

and from this the Examiner concludes:

> **"It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a multiplicity of washing machines and operate these machines with a single programmer 60"**

Although the statement relating to Blackburn is somewhat accurate the conclusion is not supported. Applicant respectfully submits that the examiner has misinterpreted the teaching of Blackburn, there is a single programmer 40 or 60 associated with each supply. Programmers 40 and 60 do not operate multiple washer units only multiple supplies. As shown in figures 2 and 3, programmers 40 and 60 operate multiple solenoids 29, each associated with a supply 1-4 using dispensing systems as illustrated in figure 1. Each of the supplies 1-4 have the complete system of figure 1. It is the multiple supplies that are actuated by the programmers of Blackburn, not the multiple washer units. Also in Blackburn a programmer is required for each washer unit.

It is clearly stated in Blackburn in column 2, lines 55-57 as follows:

> **"A programmer 40 for each washing machine serves to control a plurality of supplies such as "supply 1".**

As indicated above the programmers 60 do not "enable independent operation of a washing machine" as stated by the Examiner.

The Examiner further dismisses the patentability of the system of claim 1 with the following statements:

> **"a duplication of washing machines is convenient for public use, for use in a washing/dry cleaning business, and in private community washing locations for washing many loads of laundry at one time and being able to monitor them all together. Laundromats are commonly known establishments in the art that provide multiple washing machines connected to a single programming function. It is well settled that the mere duplication of parts has no patentable significance."**

This constitutes a somewhat grandiose statement of the Examiner's opinion unsupported by any references. Applicant submits that so called laundromat facilities provide individual machines for use by an individual consumer and that little has been done with respect to centralized control of the machine operation. Nevertheless, the system of claim 1 includes a system controller for controlling operation of a selected

machine, providing non-cash type payment options through coordination with a payment processor, provides selection and payment for detergents, etc., provides dispensing of metered amounts of detergent through a centralized dispensing controller and operation of the washing machine sequence through the gang controller of claim 3 and individual machine controllers. This is not a mere duplication of parts, to the contrary, there is a significant reduction in parts. It totally eliminates the need for mechanical assembly for receiving coins. The system of this application eliminates the need for cash. Payment may even be prepaid through a college bursar's account. It eliminates the individual programmers of Blackburn. The system of this application greatly facilitates the use of the facility by consumers. The system of this application is user friendly. It provides detergent, bleach and other working fluids in metered dosages designed for optimum operation of the machine, as opposed to an inexperienced individual pouring in such fluids from a large container without regard for the effect on the machine. In this manner the system avoids common problems caused by excessive use of detergents, etc. More specifically, the system eliminates the problems identified in the cited reference Pittendreigh on a system wide basis instead of on a machine by machine basis.

Claim 1 also states:

> **"a payment processor constructed to receive and approve a payment medium presented by the user according to a predetermined payment sequence;"**

In spite of the indicated narrow function and absence of capability of the programmers of Blackburn, the Examiner suggests that it would be obvious to adapt these programmers to receive a signal from the coin operated switch circuitry of the newly cited reference Hiortdahl. Hiortdahl teaches a coin actuated circuit that includes a rotary selector switch SW1 that, through rotary contact arm CA, may be connected to several washing machines. In order to prevent the accidental or intentional actuation of more than one machine, the circuit limits the charge that may be applied by a capacitor C1. This is a coin actuated switch mechanism similar to the teaching of

Pittendreigh, but used with more than one washing machine. The coin operated switch of Hiortdahl does not constitute a payment processor in the context of the claims of this application. This is akin to proposing that a microprocessor is rendered obvious by a transistor switch. The Examiner fails to indicate just how a mechanical device of this nature will be adapted for use in the multiple machine arrangement of Blackburn. The Examiner, referring to Hiortdahl states:

> **"Such a control system allows for group control of the plurality of washing machines 27. In the art of washing machines Hiortdahl supports that providing a central control console for operating a plurality of machines including a coin slot, coin metering device, a coin-operated switch a coin receptacle, and a power supply as shown. A central payment processor is convenient since it allows the user to see what machines have availability, central payment processors also allw removal of coins to be simplified, among other features."**

Again the premise in the first sentence of the above statement does not support the conclusion of the second sentence. Hiortdahl only teaches a coin operated circuitry adapted to prevent misuse. There is no suggestion in Hiortdahl of a central control console, for operating a plurality of washing machines or for generating a signal that can be used for activating a digital controller for multiple washing machines. Therefore, there is no disclosure or suggestion of a payment processor that performs a payment transaction and generates an output usable by a system controller. The combined teaching of Blackburn and Hiortdahl fails to disclose or suggest the elements of claim 1. Hiortdahl does not remedy the deficiencies of Blackburn. This argument is particularly applicable to claim 12, in which the payment processor comprises a card reader associated with a remote transaction authorization system

Claim 1 further states:

> **"a dispensing controller for controlling said centralized fluid distribution system according to a predetermined dispensing sequence;"**

Based on the teaching of programmers 40 and 60 of Blackburn, the Examiner avers that it would have been obvious to provide a dispensing controller according to claim 1. As

previously discussed, the programmers of Blackburn service one machine with multiple supply sources, not a group of machines. Blackburn states at column 2, lines 53-59, as follows:

> **"Referring to FIG.2, this control circuit relates to a programmer of the type initiating a single signal. A programmer 40 for each washing machine serves to control a plurality of supplies such as "supply 1", "supply 2", etc. and uses a single output connection 41."**

Therefore Blackburn fails to disclose or suggest a dispensing controller for controlling a centralized dispensing system for multiple washing machines of a facility, as described in claim 1. To the contrary, Blackburn's controllers 40 or 60 appear to control the dispensing of multiple additives to a single machine.

Claim 1 is directed to a system for controlling multiple washing machines in a facility utilizing a control hierarchy consisting of specific function controllers for processing dispensing, paying and washing for the all of the machines in a facility. These function controllers report to the system controller that effectively directs the function of the facility. Blackburn teaches a distribution system for chemical additives used in multiple machines, but the control function is decentralized to the individual machines. As stated above Hiortdahl, describes a coin operated switch system for insuring the activation of only one machine of multiple machines. The combined teaching of these references fails to disclose or suggest a system for controlling multiple washing machines of a facility.

Summarizing the above, the combined teaching of Blackburn and Hiortdahl fails to disclose the claimed feature of a centralized controller for operating multiple washing machines, for payment for and distribution of working fluids, as well as the activation of the operating cycles of a group of laundry machines in association with the requisite payment transaction. The combined teaching of Blackburn and Hiortdahl also fails to disclose or suggest a payment processor or a dispensing controller as required by claim

1 of this application.

The above remarks also traverse the grounds for rejection of the related claims 3-7, 10, 11, 14, 15, and 18-22 dependent from claim 1, as all of the above referenced limitations of claim 1, are also part of these claims by virtue of their dependency. In addition the above remarks also traverse the grounds for rejection of claims 24-34, dependent from claim 23, since claim 23 contains limitation equivalent to claim 1, and its dependent claims.

The rejection with respect to claim 3 is further traversed because of the following:

The combined teaching of Blackburn and Hiortdahl fails to disclose or suggest a gang controller that monitors and controls individual washing machines. The Examiner's suggestion that the teaching of programmer 40 in Blackburn **"allows for the group control of washing machines 27"** is unsupported by the reference, since programmer 40 controls the supply of multiple additives to an individual machine. It has nothing to do with the control of the washing machine, nor is it capable of controlling a plurality of washing machines. In dismissing claim 3, the examiner states, with reference to Blackburn as follows:

> **"Moreover, a gang controller is taught by Blackburn for achieving monitoring of the individual washing machines."**

Applicant is at a loss to understand the basis for this statement. As previously stated and shown, programmers 40 and 60 of Blackburn service one machine, not a group of machines. Each of the washer units of Blackburn requires it own programmer. There is no gang controller disclosed or suggested in Blackburn.

The rejection with respect to claim 4 is further traversed because of the following:

The combined teaching of Blackburn and Hiortdahl fails to disclose or suggest a pump, a distribution manifold and valve system as described in claim 4, wherein the pump and valves are controlled by the dispensing controller. There is no dispensing controller for the facility only a programmer for an individual machine. The pump 16 of Blackburn is controlled by float switch 21 of head tank 19 to deliver fluid from holding tank 14 to head tank 19. The head tank 19 supplies fluid, by gravity feed, directly to dispenser tank 24 at each machine (see column 2, lines 27-29). There is no teaching of a distribution manifold according to claim 4.

In response to Applicant's arguments with regard to the failure of Blackburn to teach a manifold, the Examiner concedes the proffered definition of a manifold, but indicates that pipe 22 provides a function similar to a manifold. The manifold described in claim 4 of this application is connected to distribute the working fluid through multiple conduits to the washing machines. Pipe 22 is only a supply pipe that directs fluid by gravity to dispensing tank 24. As such it cannot provide the functions facilitated by the manifold of the subject application. Applicant submits that the conduit 22 of Blackburn cannot function as a manifold in the system of Blackburn. It is open to ambient conditions to allow the flow of fluid from head tank 19 by gravity. The conduit 22 does not provide the basis for the collateral functions of stabilization, flow monitoring and temperature sensing of the manifold of this application.

The rejection with respect to claim 5-7 is further traversed because of the following:

The combined teaching of Blackburn and Hiortdahl fails to disclose or suggest a system of sensors to monitor flow continuity in the fluid distribution system. The Examiner refers to "respective solenoid sensors 29" as supporting the rejection. There are no solenoid sensors only solenoids 29. Solenoids are electrically triggered actuators and are not generally used or recognized as sensors. The float switch 21 does not constitute a system of sensors for monitoring flow continuity. The Examiner indicates

that float switch 21 reads on a first sensor and solenoid sensors 29 read on a second flow sensor. As indicated above a solenoid is an actuator, solenoids 29 are described in Blackburn as "solenoid operator 29", "solenoid 29", and "solenoid valve 29". There is no reference to a solenoid sensor. Float switch 21 senses the level of fluid in head tank 19 to actuate or deactivate pump 16. It does not sense flow. There is no way of knowing when pipe 22 ruptures or one of the tanks 24 overflows. Pump 16 will continue to pump until the float switch 21 indicates that tank 19 is at its proper level. Solenoid operator 29 is triggered by a signal from programmer 60 to open valve 25 and dump fluid into a machine. There is no flow sensing function taught by these elements.

The rejection with respect to claim 15 is traversed based on the following grounds:

The combined teaching of Blackburn and Hiortdahl fails to disclose or suggest an algorithm that causes the system controller 1 of this application to activate the dispensing system control processor 2 in response to acceptance of a payment by the payment processor 25. There is no payment processor mentioned in Blackburn and the mechanical coin operated switch of Hiortdahl does not provide a processor that can execute an algorithm based on a payment transaction. The combined teaching of Blackburn and Hiortdahl does not disclose or suggest an algorithm that executable by a system controller to make washing machine operation contingent on the processing of a payment transaction.

Applicant notes that the Examiner has failed to apply the combined teaching of Blackburn and Hiortdahl specifically to the subject matter of claims 18-22. Since claims 18-22 recite algorithms executed by a system controller and there is no system controller disclosed or suggested in the combined teaching, applicant submits that the subject matter of these claims is not rendered obvious by said combined teaching.

The Examiner indicates that the temperature sensor for monitoring the temperature of a working fluid would be obvious because it is well know to optimize the temperature of of the water used in the washing machine. Claim 8 states that the temperature sensor is in the distribution system for working fluids, i.e. soap, not in the washing machine. Nothing in the combined teaching discloses or suggests that it would be advantageous to sense the temperature of soap before it is dispensed into the washing machine.

B. The combined teaching of Blackburn and Hiortdahl in view of Pittendreigh does not render the subject matter of claims 2, 16, 17, 23-27 and 34-36 obvious because it fails to teach or otherwise suggest each and every limitation of these claims.

The combined teaching of Blackburn, Hiortdahl and Pittendreigh fails to disclose or suggest a user interface that allows the user to make selections that may be applied to any of the washing machines of the system in response to prompts. As indicated above the combined teaching fails to disclose or suggest a system controller, accordingly there can be no user interface according to claim 2. This illustrates an attempt by the Examiner throughout the prosecution of this application to restrain the application of advance technology by insisting that functions, that have become recognized as part of the computer processing art, read on antiquated mechanical actuators that may or may not provide analogous functions. Applicant submits that the term "user interface" in the context of the subject matter of this application takes on a meaning that is recognized by those skilled in the art. This recognized meaning implies an interaction between a system processor and the user interface. It does not read on an appliance control panel having indicator lights and control switches. The series of lamps 81-85 on panel 62 of Pittendreigh indicate a current cycle of operation of the washing machine. The timer motor 90 actuates these cycles by mechanical adjustment through relays. This is not the interactive function represented by a user interface operatively associated with a system processor.

The rejection with respect to claims 23-27, 29-31, and 34-36 is further traversed on the following grounds:

The combined teaching of Blackburn Hiortdahl and Pittendreigh fails to disclose or suggest a system that is capable of performing the method of claims 23-34. There is no user interface that is capable of prompting the user; to initiate the presentation of a payment medium, to select a washing machine, or to select a working fluid, described or implied in the either of the cited references. There is no capability in the combined teaching for processing a transaction for payment of a selected working fluid and washing machine. There is no disclosure anywhere in the combined teaching of the cited references, that the dispensing of a working fluid is contingent on a payment transaction being processed and verified.

C. Claims 8-9, stand rejected under 35USC103(a) based on the combined teaching of Blackburn, Hiortdahl and in view of the teaching of Bruntz, U.S. Patent No. 5,978,995. This rejection is traversed on the following grounds:

The temperature sensors, according to the claims, are used for monitoring the temperature of the **working fluid**. The reference Bruntz discloses a system for adjusting the temperature of the wash and rinse water of a washing machine. There is no indication in Bruntz or the combined teaching that the temperature of the detergent or other additive is of any interest whatsoever. Nor is there any disclosure or suggestion in Bruntz of a means by which to accomplish the temperature sensing of the working fluid. Bruntz therefore, fails to remedy the deficiencies of the combined teaching of Blackburn and Hiortdahl.

The Examiner characterizes the combined teaching of Blackstone, Hiortdahl and Bruntz as follows:

"It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate said feature of Bruntz to Blackburn and Pittendreigh *(Hiortdahl?)* to allow user to select a temperature control and optimize temperature of the liquid washing solution therein to achieve aforementioned desired cleaning means."

This statement is unsupported by the combined teaching, since as indicated above, the only teaching of Bruntz is the sensing of the temperature of the washing solution within the washing machine. There is no teaching of measuring the temperature of the soap or other additive before it is dispensed.

The rejection of claims 35 and 36 is traversed on the same grounds as indicated above for claim 1 and claim 4.

D. Claims 28 and 32-33, are not rendered obvious under 35USC 103(a), based on the combined teaching of the references Blackburn, Hiortdahl, Pittendreigh, and Bruntz for the same reasons as expressed in C. above. The teaching of Pittendreigh does not remedy the deficiencies of the combined teaching of Blackburn, Hiortdahl, and Bruntz.

E. Claims 12 and 13 are not rendered obvious under 35USC103(a) on the basis of the combined teaching of Blackburn and Hiortdahl and further in view of Yamamoto. This rejection is traversed on the same grounds as indicated with respect to claim 1. The teaching of Yamamoto does not remedy the deficiencies of the combined teaching of Blackburn and Hiortdahl as indicated above.

The combined teachings of the cited references do not, therefore, support a prima-facie case of obviousness with respect to any of the claims. The modification of the teachings of Blackburn, Hiortdahl, Pittendreigh and/or Bruntz, and/ Yamamoto, in order to obtain the invention, as described in any of the claims submitted herein, would not have been obvious to one skilled in the art.

The Examiner has combined references where there is no incentive or encouragement to do so. The system of Blackburn is used in a commercial laundry, where there is no "pay-as-you-go" operation. It is operated by trained individuals who operate the system as part of an industrial laundry. The system of Pittendreigh is designed to limit the occurrence of excessive suds in an individual washing machine. Although the individual washing machine in Pittendreigh may be coin operated, a person skilled in the art would not be inclined to insert a coin operation function in the industrial wash process of Blackburn. Hiortdahl is similar in teaching to Pittendreigh. Such a combination would only interfere with the orderly operation of a commercial laundry. As previously stated, such "coin operation", even if suitably combinable with the system of Blackburn would not render the payment processor of this application obvious.

Section 2142 of the Manual of Patent Examining Procedure indicates the following:

> **"To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria."**

Applicant submits that the Examiner has failed to present a prima facie case of obviousness because there is no suggestion or motivation to make any of the combination of teachings proposed by the Examiner. In addition, even if the teachings of the cited references were combined, these teachings fail to teach or suggest all of the claim limitations.

In response to Applicant's arguments, the Examiner states:

"Hiortdahl teaches a payment processor for use with a multiplicity of washing machines controlled by a single controller."

This is an exaggerated characterization of the teaching of Hiortdahl. As indicated above the teaching of Hiortdahl relates to a coin operated switch system designed to insure that only one machine is actuated. Although the coin operated switch, may be used to activate one of a plurality of machines, there is nothing that indicates that the plurality of machines are controlled by a single controller.

Further the Examiner states:

"As seen in figure 3 of Blackburn, a single controller 60 is shown coupled to multiple washing machines 27."

It is clearly shown in figure 3 that the controller 60 is coupled to multiple supplies 1-4, not washing machines 27.

Also in response to Applicant's arguments, the Examiner states:

"It is taught that Hiortdahl reference supports providing a central control console for operating a plurality of machines. The payment processor and central control console of Hiortdahl work together."

Applicant submits that the Examiner is mistaken as there is no disclosure or suggestion of a central control console in Hiortdahl. The reference Hiortdahl does not support the Examiner's premise.

In response to Applicant's arguments with respect to the nature of the feed system of Blackburn, namely that it is gravity fed and therefore exposed to ambient conditions, the Examiner states:

"However this is untrue, although the conduits of Blackburn are connected to an atmospheric release valve that can be open or closed, when closed there is a pressure formed within the conduits and thus the conduits allow pressurized fluid flow through the manifold to each washing machine."

The Examiner should have read further as the pressure release valve 18 is designed to "permit entry of air into pipe 17 on cessation of pumping". This is only a factor in pipe 17 as it directs pumped fluid from supply reservoir 14 to head tank 19. Head tank 19, and dispensing tanks 24 are clearly shown open to atmospheric conditions to enable the levels in tanks 24 to seek equilibrium with the level of head tank 19. It will not work otherwise.

The examiner's citation of the new grounds for rejection based on the teaching of Hiortdahl does not appreciably contribute to the examiner's position.

[8] SUMMARY

It is respectfully submitted that all of the claims, as presented, are clearly novel and patentable over the prior art of record. Accordingly, the Board of Appeals is respectfully requested to favorably consider the rejected claims and to reverse the final rejections, thereby enabling this application to issue as a U.S. Letters Patent.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being placed in the U.S Mail, for express delivery Exp Mail No. EH 130718977 US on the date indicated below, addressed to Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Date: 5/20/08 Signature: Ralph D. Gelling
Person Making Deposit

CLAIM APPENDIX

1. (currently amended) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, comprising:

a centralized fluid distribution system for dispensing a metered amount of working fluid to each of said multiple washing machines;

a dispensing controller for controlling said centralized fluid distribution system according to a predetermined dispensing sequence;

a washing sequence controller at each of said washing machines, connected to independently operate a washing machine according to a selected washing sequence;

a payment processor constructed to receive and approve a payment medium presented by the user according to a predetermined payment sequence;

a system controller connected to said payment processor, said washing sequence controller, and said dispensing controller to receive inputs therefrom and to generate and send control signals thereto according to a predetermined control sequence.

2.(original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 1, wherein a user interface is operatively connected to said system controller to allow the user to make selections in response to prompts from said system controller.

3. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 1, wherein said system controller is connected to the multiple washing machines through a gang controller which monitors the status of the washing machines and controls said washing machine controllers.

4. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 1, wherein said centralized fluid distribution system comprises:

at least one tank for holding a working fluid;

a pump for moving working fluid downstream from said tank under pressure into a distribution conduit;

a distribution manifold connected to receive working fluid pumped from said tank and distribute said fluid to multiple conduits connected to said multiple washing machines;

a valve connected in each of said washing machine conduits to control the flow of working fluid therein; and

wherein said pump and said valve are controlled by signals from said dispensing controller to dispense a metered amount of working fluid according to a predetermined dosage .

5. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 4, wherein said centralized fluid distribution system further comprises a system of sensors for monitoring the flow continuity of said fluid distribution system.

6. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 5, wherein said system of sensors comprises a first flow sensor connected in said distribution conduit downstream of said pump for generating a first signal indicative of the flow of working fluid therein, said first signal being sent to said dispensing controller.

7. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 6, wherein said system of sensors further comprises a second flow sensor connected in said distribution conduit downstream of said valve for generating a second signal indicative of the flow of working fluid therein, said second signal being sent to said dispensing controller.

8. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 4, wherein said centralized fluid distribution system further comprises a temperature sensor for sensing the temperature of said working fluid and sending a signal indicative thereof to said dispensing controller.

9. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 8, wherein said temperature sensor is positioned to sense the temperature of the working fluid in said distribution manifold.

10. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 4, wherein said centralized fluid distribution system further comprises at least a second tank for holding a second working fluid wherein said second tank is connected to:

a second pump for moving working fluid downstream from said second tank under pressure into a second distribution conduit;

a second distribution manifold connected to receive said second working fluid pumped from said second tank and distribute said second fluid to second multiple conduits connected to said multiple washing machines;

a second valve connected in each of said second washing machine conduits to control the flow of said second working fluid therein; and

wherein said second pump and said second valve are controlled by signals from said dispensing controller to dispense a metered amount of said second working fluid according to a predetermined dosage.

11. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 4, wherein said tank includes a level sensor to monitor the supply of working fluid therein.

12. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 1, wherein said payment processor comprises a card reader to receive a payment card from said user, said payment processor being in communication with a remote transaction authorization system.

13. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 1, wherein said payment processor comprises a card reader to receive a stored-value payment card from said user and to deduct the payment from the balance stored on the card.

14. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 1, wherein said payment processor comprises a mechanism for accepting cash payments.

15. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described

in claim 1, further comprising a first algorithm operatively associated with said system controller and wherein said first algorithm causes said system controller to activate said dispensing system control processor in response to acceptance of said payment medium by said payment processor.

16. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 15, wherein said first algorithm causes said system controller to prompt said user, through said user interface, to select one of said multiple washing machines and to check the status of the selected washing machine in response to said user's selection.

17. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 16, wherein said first algorithm further causes said system controller to check the supply of working fluids and prompt said user, through said user interface, to select only those said working fluids that are currently available.

18. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 1, wherein said dispensing controller further comprises a second algorithm operatively associated with said dispensing controller and wherein said second algorithm causes said dispensing controller to activate said pump for a predetermined interval, prior to dispensing, to allow said working fluid to fill said fluid distribution system to the valve associated with the selected washing machine in response to a signal from said system controller.

19. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 18, wherein said second algorithm causes said dispensing controller to vary the fill interval according to the working fluid being dispensed.

20. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 18, wherein said second algorithm causes said dispensing controller to open said valve for a predetermined period to dispense a metered dosage of working fluid to the selected washing machine after the expiration of said fill interval.

21. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 18, wherein said second algorithm causes said dispensing controller to check the continuity of the fluid distribution system during dispensing of working fluid.

22. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 18, wherein said second algorithm causes said dispensing controller to adjust the open time of the valve according to the temperature of the working fluid.

23.(currently amended) In a system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, a method for dispensing working fluid comprising the steps of:

prompting the user to present a payment medium:

prompting the user to select a washing machine and verifying the available status thereof;

activating the selected washing machine;

sensing the availability of working fluid for dispensing in a reservoir for said working fluid;

prompting the user to select a working fluid;

processing a transaction according to the selections made by the user to verify authenticity of the payment medium and authorize payment; and

in response to payment, dispensing a metered dosage of the selected working fluid to the selected washing machine; and

24. (original) In a system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, a method for dispensing working fluid, according to claim 23, further comprising the step of monitoring the availability of working fluid by counting the number of dosages dispensed.

25. (original) In a system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, a method for dispensing working fluid, according to claim 23, further comprising the step of monitoring the availability of working fluid by sensing the level of working fluid in the reservoir for said working fluid.

26. (original) In a system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, a method for dispensing working fluid, according to claim 23, wherein the step of dispensing a metered dosage of the selected working fluid to the selected washing machine further comprises the steps of:

activating a pump to fill a distribution manifold with the selected working fluid;

connecting the manifold to the selected washing machine through a conduit;

controlling the flow of working fluid in the conduit by means of a valve;

opening said valve to allow working fluid to flow to said washing machine for a predetermined time in order to deliver a predetermined dosage of the selected working fluid.

27. (original) In a system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, a method for dispensing working fluid, according to claim 25, further comprising the step of delaying the opening of the valve for a predetermined fill interval to allow the working fluid to establish a flow in the manifold and conduit.

28. (original) In a system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, a method for dispensing working fluid, according to claim 27, wherein the step of opening said valve to allow working fluid to flow to said washing machine for a predetermined time further comprises the steps of:

checking the temperature of the working fluid; and

adjusting the fill interval according to said temperature.

29. (original) In a system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, a method for dispensing working fluid, according to claim 23, further comprising the step of checking the continuity of the working fluid flow path through the manifold and conduit.

30. (original) In a system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, a method for dispensing working fluid, according to claim 29, wherein the step of checking the continuity of the working fluid flow path through the manifold and conduit

is accomplished by placing at least one flow sensor in the working fluid flow path and monitoring the signals from said flow sensor.

31. (original) In a system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, a method for dispensing working fluid, according to claim 29, further comprising the step of checking the continuity of the working fluid flow path through the manifold and conduit by monitoring the activation time period of the pump and setting a maximum run time indicative of failed continuity.

32. (original) In a system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, a method for dispensing working fluid, according to claim 28, wherein the sensing of the temperature is delayed for a predetermined interval to allow the temperature to reach equilibrium.

33. (original) In a system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, a method for dispensing working fluid, according to claim 32, wherein temperature equilibrium is determined by sensing the temperature of the working fluid in the reservoir and in the manifold and determining equilibrium when said sensed temperatures are equal.

34. (original) In a system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, a method for dispensing working fluid, according to claim 27, wherein the fill interval is adjusted depending on the selected washing machine to accommodate different lengths of flow paths for the washing machines.

35.(currently amended) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, comprising:

a centralized fluid distribution system for dispensing a metered amount of working fluid to each of said multiple washing machines;

a dispensing controller for controlling said centralized fluid distribution system according to a predetermined dispensing sequence;

a washing sequence controller at each of said washing machines, connected to independently operate a washing machine according to a selected washing sequence;

a system controller at each of said washing machines, connected to said washing sequence controller, and said dispensing controller to receive inputs therefrom and to generate and send control signals thereto according to a predetermined control sequence; and further wherein said centralized fluid distribution system comprises:

at least one tank for holding a working fluid;

a pump for moving working fluid downstream from said tank under pressure into a distribution conduit;

a distribution manifold connected to receive working fluid pumped from said tank and distribute said fluid to multiple conduits connected to said multiple washing machines;

a valve connected in each of said washing machine conduits to control the flow of working fluid therein; and

wherein said pump and said valve are controlled by signals from said dispensing controller to dispense a metered amount of working fluid according to a predetermined dosage .

36. (original) A system for controlling the operation of a pay-as-you-go laundry facility that includes multiple washing machines using at least one working fluid, as described in claim 35 further comprising a payment processor constructed to receive and approve a payment medium presented by the user according to a predetermined payment sequence.

EVIDENCE APPENDIX

(Not Applicable)

RELATED PROCEEDINGS APPENDIX

(NONE)